

## ASSYRIAN PALACES: FROM THEIR FOUNDATION TO THEIR DESTRUCTION IN ANTIQUITY<sup>1)</sup>

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“I founded therein a palace of cedar, cypress, *daprānu*-juniper, boxwood, *meskannu*-wood [dalbergia], terebinth, and tamarisk as my royal residence [and] for my lordly leisure for eternity. I made [replicas of] beasts of mountains and seas in white limestone and *parūtu*-alabaster [and] stationed [them] at its doors. I decorated it in a splendid fashion; I surrounded it with knobbed nails of bronze. I hung doors of cedar, cypress, *daprānu*-juniper [and] *meskannu*-wood in its doorways. I took in great quantities and put therein silver, gold, tin, bronze, booty from the lands over which I gained dominion.” [Grayson 1991, 227–28]<sup>2)</sup>

“May a later prince restore its weakened [portions and] restore my inscribed name to its place. [Then] Ashur will listen to his prayers. He must not forsake my mighty palace, my royal residence, of Calah, nor abandon [it] in the face of enemies. He must not remove the doors, beams, [or] knobbed nails of bronze from it [and] put them in another city [in] another palace. He must not smash its beams. He must not tear out its drain pipes. He must not clog the outlets of its rain spouts. He must not block up its door. He must neither appropriate it for a warehouse [nor] turn it into a prison. He must not incarcerate its men or women as prisoners therein. He must not allow it to disintegrate through neglect, desertion, or lack of renovation. He must not move into another palace, either within or without the city, instead of my palace.” [Grayson 1991, 252–53]

The first Assyrian capital was at Assur, an ancient city already existing by the third millennium BC on the right bank of the river Tigris. For the Late Assyrian period, archaeologically this is the least well-known of the Assyrian capitals, but covered an area of 65 hectares, six plundered stone sarcophagi (three with the names of Late Assyrian kings) were found with the remains of a palace, and part of the residential quarter has also been excavated [Miglus 2000].

During the ninth century BC king Ashurnasirpal II (883–859 BC) decided to shift the capital to a new location and selected the site of a provincial town located 75 kilometres further north. This was situated within a fertile plain between the Tigris and the Greater Zab rivers: this spot was less vulnerable to attacks from the steppe, better connected to routes crossing northern Mesopotamia and had a richer agricultural hinterland. This new capital was named Kalhu (biblical Calah, present-day Nimrud) and covered an almost square area of 360 hectares: the old town was levelled and its mound incorporated into a massive brick platform with a ziggurat and temples at the northern end and his own palace (known today as the North-West Palace) nearby (Fig. 1). The inauguration five years later, in 879 BC, was celebrated with an immense feast for 69,574 guests, including 47,074 from Assyria, 5,000 foreign envoys, 16,000 inhabitants of the city and 1,500 courtiers “from all palaces” [Wiseman 1952, 31–32]. In the passage quoted above, it is clear what Ashurnasirpal thought his legacy to be, and over the following centuries his citadel started to fill up with other buildings as each Assyrian king added his own palace.<sup>3)</sup> A series of important residences was also

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1) This is a lightly adapted English version of an essay published in the Russian-language catalogue of the exhibition ‘*I founded therein my royal palace*’. *Assyrian art from the British Museum*, held at the State Hermitage Museum from 10th December 2019 – May 2020.

2) Another version is given on p. 252.

3) It is easy to forget that with every new addition there was a transformation of how the citadel functioned, much like the platform at Persepolis was constantly modified through the Achaemenid period.

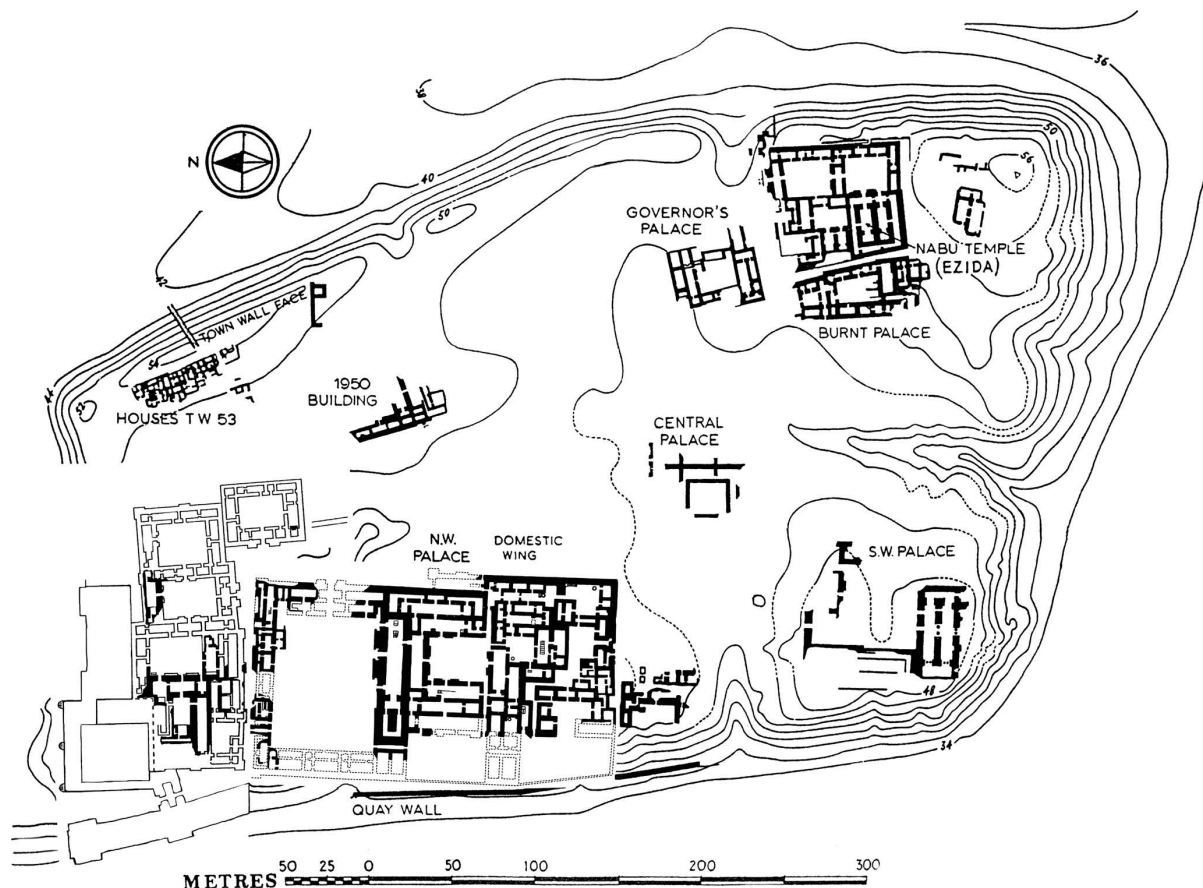


Fig. 1. Plan of the excavated palaces, temples and houses on the citadel of Nimrud [after Mallowan 1966]

built along the stretch of wall adjacent to the lower city while the centre appears to have had an open plaza containing free-standing monuments [Mallowan 1966; Reade 2002]. Large-scale excavations at Nimrud began in 1845 with the work of Austen Henry Layard (1817–1894) and continued at intervals until about 2001. At the opposite end of the city lay the palace, royal arsenal and workshops (*ekal mašarti*) of king Shalmaneser III (858–824 BC), which was partly excavated by British and Italian expeditions in 1957–1963 and 1987–1989 [Mallowan 1966, vol. II, 1–598; Oates and Oates 2001, 144–94; Curtis *et al.* 1993; Fiorina 2008]. The lower city must have contained other important buildings and temples, as well as residential and industrial quarters, but this – like the equivalent lower cities of Khorsabad and Nineveh – remains almost totally unexplored (Fig. 2).<sup>4)</sup>

In 721 BC king Sargon II (722–705 BC) decided to found a new capital at a different spot 45 kilometres further north and named it after himself: Dur-Sharrukin (“Fort Sargon”), known today



Fig. 2. Aerial view of Nimrud (British Museum archive, Department of the Middle East)

4) A topographic and archaeological survey were initiated by the Centro Scavi di Torino, under the direction of the late Dr Paolo Fiorina, but political circumstances intervened and the work was not completed.

as Khorsabad (Fig. 3). It was laid out on a similar plan to Nimrud, covered a similar area of 320 hectares and was supplied with water through a complex canal system drawing runoff from neighbouring Jebel Bashiqa through gravity flow [Reade 1978; Ur 2005; Morandi Bonacossi 2018; Ur and Reade 2015]. The city was first explored in 1843–1845 by Paul-Émile Botta (1802–1870), Victor Place (1818–1875) between 1852 and 1855, and finally by the Oriental Institute Chicago between 1928 and 1935 [Botta 1849/50; Place 1867/70; Loud and Altman 1938; Loud, Frankfort and Jacobsen 1936; Albenda 1986]. Despite the careful planning which went into the layout of the city with its symmetrical gates, the palaces on the citadel were designed as individual units rather than being conceived as parts of an entire complex. There is also evidence for construction being hurried as bricks were laid while still soft and stone chippings indicate wall slabs were carved *in situ*. Only a decade after work began, Sargon died on campaign against the Neo-Hittite kingdom of Tabal in present-day Cappadocia.

This event was considered so unlucky that his successor Sennacherib (704–681 BC) opted to switch the capital to a different location on the left bank of the river Tigris, approximately midway between Khorsabad and Nimrud. This was even larger in extent, covering about 750 hectares, with a raised citadel on top of a much older settlement at the spot now known as Tell Kuyunjik and an arsenal on top of a second mound known today as Tell Nebi Yunus [Turner 1970; Reade 2000*a*] (Figs 4–6). Excavations by Layard and others have revealed the partial plans of the palaces of Sennacherib and Ashurbanipal (668–631 BC) at either end of Kuyunjik with the remains of temples to Nabu, Ishtar, Sin-Shamash, Kidmuri and Adad in the centre of the citadel. Iraqi excavations and illegal tunnelling on Tell Nebi Yunus have revealed two sets of *lamassu*, reused Assyrian sculptures in Sargonid style and statues of the Egyptian Pharaoh Taharqa (c.690–664 BC) brought back as booty from Esarhaddon's (680–669 BC) invasion of Egypt and placed at one of the entrances to his palace there [Scott and MacGinnis 1990, 64–67; Reade 2017; MacGinnis 2017, figs 16.2–16.3; Anderson 2020]. The north-east part of the city was previously thought to be unoccupied and contained either royal parks and gardens or open-air markets, but new discoveries indicate more palatial construction here, and remains of a craft activity and other elite residences have been identified in the north-west corner. The area between the citadel and arsenal formed the urban core, as at Nimrud and Khorsabad, but has been largely destroyed by modern housing. Beyond the walls, the agricultural hinterland was irrigated via an unprecedented network of canals, channels, aqueducts, weirs, reservoirs and other hydraulic infrastructure bringing



Fig. 3. Drawing of the village and archaeological tell of Khorsabad (© New York Public Libraries Open Access)



Fig. 4. View of Tell Nebi Yunus taken by George Blaker (1912–2001) in the early 1930s: archaeological excavations were undertaken here in 1954 and 1986 but ended with the First Gulf War; the mosque was destroyed by Daesh in 2014 (BM 2013,6044.1.2, donated by Ms R.J. Blaker)





Fig. 5. Plan of Nineveh made by Claudius James Rich



Fig. 6. Aerial view of Kuyunjik, the citadel of Nineveh (British Museum archive, Department of the Middle East)

water from highlands in present-day Kurdistan [Reade 1978; Ur 2005; Ur and Reade 2015; Morandi Bonacossi 2018]. Rural settlement was boosted by the re-settling of deportees, all part of the imperial plan to “remake the economy and demography of Assyria” [Wilkinson *et al.* 2005, 32; cf. also Ur and Osborne 2017], and an inscribed stela of Adad-Nirari III found in the sanctuary of the temple at Tell al-Rimah refers to that king’s foundation of “a total of 331 towns [and villages] of subject peoples” [Page 1968, 151–52, pls XL–XLI].

Assyrian palaces were mostly built of sun-dried brick and, like the traditional domestic architecture of ancient and modern Mesopotamia, were generally one-storied building complexes with interconnecting suites of rooms and open courtyards. The much thicker walls of the throne-room suites imply that these were the rooms with the highest ceilings and the construction of rooms of different heights allowed ventilation as well as limited lighting. Sargon II states that his palace walls were 180 *tipki* (brick courses) in height [Luckenbill 1926/27, vol. II, 110], corresponding to 18 metres and which accords well with the excavators’ reconstruction of a collapsed wall-painting in Room 12 of Residence K at Khorsabad which shows that the ceiling must have had a minimum height of 14 metres [Loud and Altman 1938, vol. II, 20, 83, pl. 88]. All of these palaces had complex architectural and stratigraphic histories as none were completely abandoned, and it is a great pity that, despite over a century and a half of excavations, we still do not fully understand how they functioned. They varied considerably in size and shape depending on the space available on the raised citadels where they were constructed, but in one respect all shared the basic plan of two units, each centred on a main courtyard with a large forecourt and an inner court which were connected by a reception suite with a throne-room. Few palaces have been completely excavated and the best example is the North-West Palace of Ashurnasirpal II. In front of the reception suite

lay a large open courtyard, paved with plain fired bricks but also incorporating stone slabs with circular openings, perhaps for drainage, and one author has suggested the existence of rows of posts as part of screens or covered ways running across the Inner Court of the North-West Palace [Reade 1994, 277]. Behind the reception suite lay other complexes of rooms and, just as in the third/second millennium BC palace at Mari, the most private part formed the residential quarters of the royal family. It was here in the North-West Palace that queens were buried in subterranean brick-built vaulted tombs and the concept of either interring human remains below the floors of the living or leaving cranial fragments on the floors as part of the abandonment represents a millennia-old tradition which extends deep into Near Eastern prehistory [Mahmoud Hussein 2016; cf. Rollefson 1986; Watkins 1990]. The private parts of the palaces do not appear to have been heavily decorated although doubtless the floors were originally covered with carpets and rugs, and the decorated stone thresholds show repeating floral designs with tassel-like garlands of alternating lotus-and-palmettes which may imitate imported Phoenician textiles [Albenda 1978; 2005, 114–18; Curtis and Reade eds 1995, 100–101, cat. 45] (Fig. 7).

In contrast, the official parts of the palaces were decorated and in various ways, all emphasising the power of the king and his god Ashur. Ordinary houses were roofed with locally sourced poplar poles but the greater width of the palatial equivalents meant that beams of longer length needed to be sourced, and Layard describes how when he was excavating at Nimrud he found some of his workmen had made a fire using chunks of beam they had just unearthed in rooms of the Temple of Ninurta: scientific analysis of these shows they are cedar and corroborate Assyrian accounts of bringing wood from Mount Lebanon, the nearest source of this wood [Layard 1853a, 357; Simpson 2015, 11] (Fig. 8). Other types of imported wood said to have been used in construction included African blackwood (“ebony”), juniper, terebinth, cypress, oak and fir [Turner 1970, 74]. Above the beams originally there was a thick layer of earth, covered with matting and sealed with tamped earth and bitumen: when the palaces were sacked in 612 BC these layers were removed in order to strip the beams for re-use, and the discarded earth sealed the lowest portions of the wall reliefs below from the conflagrations and gradual weathering which followed (Fig. 9).

It was in these ceremonial areas of the Assyrian palaces that stone orthostats were erected along the walls, levelled on beds of soft bitumen, sand and crushed stone, and held together by iron and copper clamps.<sup>5)</sup> Most of the slabs were about two metres high but some were even larger. They were normally carved from whitish or light grey nodular gypsum from the Lower Fars

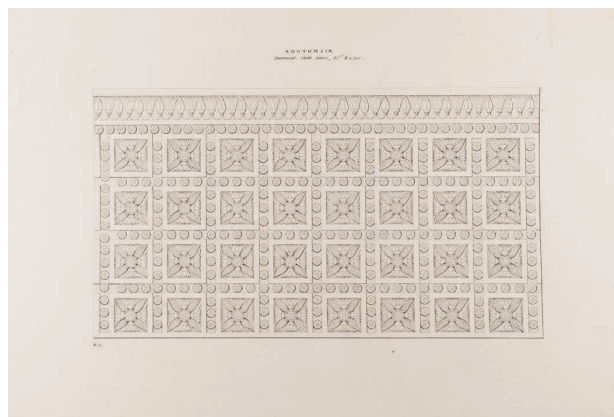


Fig. 7. Stone threshold slab carved in imitation of a carpet (British Museum, Original Drawings)



Fig. 8. Wooden beam found in the Temple of Ninurta at Nimrud

5) Layard remarks on how the stone paving in a room he excavated in the South-West Palace at Nimrud ‘had been placed upon a layer of bitumen which must have been used in a liquid state, for it had retained, with remarkable distinctness and accuracy, an impression of the characters carved upon the stone’ [1849: vol. I, 29].

Formation of the Middle Miocene period and which is common across northern Iraq (Fig. 10): this was widely used on nineteenth century town-houses in Mosul (hence its popular name of “Mosul marble”) and Erbil. Others, such as the massive Teumman series from Ashurbanipal’s South-West Palace at Nineveh, were carved from fossiliferous limestone [Mitchell and Middleton 2002; Bianchetti 2011; Bianchetti and Vigliano 2011]. All tended to be referred to as alabaster or limestone in the nineteenth century but this is incorrect. Neither of these stones are found in the immediate proximity of the Assyrian capitals and therefore must have been quarried some distance away and brought to the sites of construction. Initially, quarries south of Nineveh at Tastiate were worked but carved wall panels from the palace of Sennacherib at Nineveh show the cutting and trimming of massive stone gateway figures (*lamassu*) at a place called Balatai, on the left bank of the Tigris opposite the site known today as Eski Mosul (medieval Balad), some 35 kilometres upstream from Nineveh. They also illustrate the dumping of quarry rubble to create a level road, gangs of workmen dragging the roughed-out sculptures on sledges placed on top of sets of log rollers which were collected and re-laid at intervals, the clearing of trees and the ground along the route by workers carrying two-handled iron saws, spades and picks, water channels being diverted into alternative streams using lifts, the way guarded by troops, and foremen overseeing the whole complex operation (Fig. 11). The *lamassu* are shown being transported in a roughed-out monolithic state but the finishing was carried out at the final destination, presumably when they were set upright, and a letter to Sargon from a governor of Kalhu confirms this: “We shall place the hewn colossi before the ... residence; they will trim the big ones and we shall place them before the middlemost gate” [Russell 1991, 100–16; letter quoted by Oates and Oates 2001, 52]. Layard estimates their weight as 40 to 50 tons, and the challenges of their transport are illustrated by another letter to Sargon which reported that “Ashur-shumuke’in called me to help and loaded the bull colossi on the boats, but the boats could not carry the load [and sank]. Now, although it cost me a great deal of trouble, I have hauled them up again” [Layard 1853*a*, 110; letter quoted by Oates and Oates 2001, 52].

Little is known about the craftsmen who quarried, transported or carved these sculptures but an epigraph on the wall-slab showing the quarrying and transport describes the scene and states that “I [Sennacherib] had men from enemy towns and the inhabitants of hidden mountain regions, conquest



Fig. 9. The lower part of this wall slab was buried by earth removed from the roof so was protected from the calcining effect caused during the burning of the palaces



Fig. 10. Outcrop of gypsum next to the river Tigris (photograph: D. Collon)



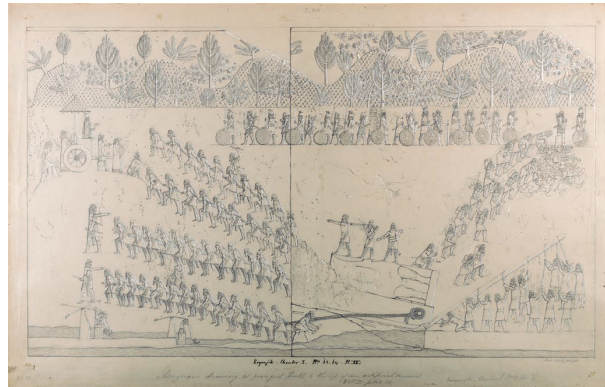


Fig. 11. Dragging a *lamassu* from the quarry (British Museum, Original Drawings)

of my hand, wield iron picks and masons' picks (?)” [Russell 1991, 260, 275]. An inscription of Ashurbanipal gives another illustration of how conquered subjects from the borders of the empire helped build the imperial centre of power:

“On Elamite wagons, which I had carried off at the command of the great gods, my lords, the people of my land brought the bricks ... The kings of Arabia, who had violated the oaths sworn to me, whom I had taken alive in the midst of battle with my [own] hands, I made to carry the basket and headpad, and to do taskwork, for the building ... Moulding its bricks, performing labour upon it, they passed their days to the accompaniment of music.” [Luckenbill 1926/27, vol. II, 835–38]

None of the reliefs were signed and, unlike the glazed bricks or later Achaemenid sculptures from Persepolis, there are no fitter's marks or masons' marks to hint at the composition or organisation of the workforce. However, like the Persepolitan sculptures, the considerable variation in detail indicates the work of many craftsmen, not all were completed and these partially unfinished sculptures illustrate some of the next stages of the *chaîne opératoire* [Layard 1849, vol. II, 78; Lippolis 2011, 43–49; Fazio 2011; cf. Roaf 1983; Sweek and Simpson 2009]. A particularly good example comes from the end of a sequence from Room R of the North Palace at Nineveh: after setting the roughed-out wall-slab in position, the design was outlined, perhaps initially with brush and ink, and then followed with a deep engraved line, after which the surrounding areas were reduced through adzes or chisels to leave the outlined figures in low relief against a lightly graduated smooth flat background. The details on the figures were gradually added with finer chisels and points, and this particular sequence indicates that the work team began by working from left to right and from top to bottom, and it was the lowermost right corner which was left unfinished (Fig. 12). This set of reliefs was placed along one side of a vaulted passage leading to a private royal postern but its completion evidently was not considered a priority [Reade 2000b, 608]

Guidelines were also used prior to carving the cuneiform inscriptions. In other cases, the details were mis-understood and sometimes corrected by re-carving, such as the erasure at Khorsabad of beards on figures intended to be eunuchs. Small details on the lion hunt reliefs of Ashurbanipal from his North Palace at Nineveh hint at another aspect as the tails of several of the lions were re-engraved, suggesting that there was signing-off process by which a court official or perhaps even the king himself checked the scene on completion and in this case exercised his importance by ordering that this minor change be made before the project could be considered complete [Reade 2000b, 609–10, fig. 2] (Fig. 13). In yet other cases larger areas or even entire slabs were re-cut, perhaps necessitated by rising floor levels or modifications to interior fittings, or because slabs

from old and largely disused palaces were intended for recycling [Reade 2000*b*, 610–12]. It might be noted that freshly quarried stone is much softer than old slabs which have dehydrated, yet this gypsum is still sufficiently soft that re-carving was feasible, and indeed some slabs were reused simply by reversing them and placing the carved face against the walls.

The idea of adding decorated stone orthostats along the lower parts of the walls was introduced into Assyria in the ninth century BC by Ashurnasirpal II, and the earliest Assyrian wall reliefs come from his palace at Kalhu. The concept was borrowed from north Syria where local Aramaean rulers had continued a much earlier Hittite tradition, originating in highland Anatolia in the second millennium BC. The north Syrian orthostat tradition, best attested from Carchemish and Guzana (Tell Halaf), used dark grey basalt and red or white limestone blocks, each carved with an individual figure. In contrast, the Assyrians made use of larger gypsum panels which were softer and easier to carve and therefore allowed much finer detail and more complex scenes to be rendered. However, the placing of the visual imagery was re-orientated and, although there are exceptions, were generally set within the interior spaces of the palaces. It is usually said that this was because the stone is water-soluble but this only applies

to situations where it is completely exposed and saturated, whereas the projecting eaves of the roofs around the courtyards would have offered sufficient protection, just as they are on more recent architecture in Mosul and Erbil [Reade 1994, 275–76] (Fig. 14). It should also be added that not all rooms contained wall slabs, nor were all slabs carved with scenes.

This was not “art for art’s sake”: these reliefs were designed to be viewed within sequences and with particular types of scene positioned in particular spots for greatest effect. The narrative scenes were visual propaganda intended to underline the omnipotency of the king as the servant of the god Ashur whereas representations of composite beings were placed as protective deities. The reliefs were a vehicle for personal propaganda for the king and, in accordance with Mesopotamian tradition, dwelt on his achievements. They show him worshipping, receiving his courtiers and tributaries, overcoming formidable natural obstacles and vanquishing enemies and wild beasts. He is shown as invincible, triumphing even in the face of adversity and personal danger. The reliefs were also integral parts of the imperial architecture which were designed to project power and order and protect the king from evil spirits who could bring ruin and disorder.

However, Late Assyrian art was not static and there are major changes in the development of



Fig. 12. Unfinished sculpture from the North Palace at Nineveh



Fig. 13. The tip of the lion’s tail has been re-carved in antiquity



the style of the wall-panel reliefs which were carved between about 870 and 620 BC. There was also variation in quality of carving between different palaces and even different rooms. The wall-reliefs of Ashurnasirpal II are generally divided into a double register, and either read from top to bottom so that actions are represented above (such as hunting lions or fighting battles) with the consequences below (such as offering libations and overseeing booty), or as long sequences of several slabs as an extended narrative (Fig. 15). In other cases the reliefs are full-size representations, for instance of the king with his courtiers or, on the external façade, tributary figures, a narrative genre which sets a precedent for those from Sargon II's palace at Khorsabad and much later Achaemenid sculptures on the Apadana at Persepolis. The overall scheme within the throne-room was designed so that the actions emanate from the direction of the royal throne which is at the centre of a narrative which represents real Assyrian victories and illustrate Ashurnasirpal's own statement that he has "brought under one authority ferocious [and] merciless kings from east to west" [Winter 1983, 24; cf. Reade 1985]. In each case the centre is inscribed with what is known as the "Standard Inscription" of Ashurnasirpal II, repeated in slightly different versions of between 16 and 23 lines across every slab and giving an account of his reign [Paley 1976; Collins 2008, 28–61].<sup>6</sup> Some wall-reliefs show supernatural guardian spirits with the body of a man and the head of a bird of prey carrying a hinged bucket in one hand and a pollinator in the other (Fig. 16). Entire rooms in the North-West Palace were lined with these so-called genie figures and in later periods they were placed at doorways, these being considered the vulnerable points of entry. All were carved in a linear style in very low relief with bold musculature and finely incised details but little concern over relative sizes or perspective. Later wall-reliefs of Tiglath-Pileser III (744–727 BC) show varied and carefully composed compositions but are



Fig. 14. Gypsum was extensively used on external surfaces of rich town-houses on the citadel of Erbil (photograph: author, 2016)



Fig. 15. Ashurnasirpal II goes to war

6) Layard states that the wedges were highlighted with "bright copper" [Layard 1849, vol. II, 262].

much less well finished [Barnett and Falkner 1962; Collins 2008, 62–69]. Sculptures from the reign of Sargon II now include huge figures half-turned to face the viewer [Albenda 1986, pls 15, 17, figs 1–10; Collins 2008, 70–73]. This was also the point when figures typically filled entire panels rather than being placed in double registers. These sculptures were carved in higher relief than before and although the compositions and content are Assyrian they may reflect the work of north Syrian craftsmen working under close supervision. Fully frontal sculptures of priestesses holding triple-branched opium poppies and inscriptions of Esarhaddon are now attested from Tell Nebi Yunus [Ensor 2017]:<sup>7)</sup> the male figures and genies carry similar items on the sculptures at Khorsabad [Albenda 1986, figs 16–17, 19–25] and probably correspond with those described by Sennacherib: “At their gates, I stationed apotropaic figures of alabaster [and] elephant ivory, whose folded hands hold poppies” [Grayson and Novotny 2012, 139]. Sennacherib’s self-styled “Palace without Rival” at Nineveh which he boasts he “had filled with luxuriousness to be an object of wonder for all the people” contained the largest known number of reliefs from one building [Grayson and Novotny 2012, 184]: Layard estimated that he had excavated “nearly two miles [3.2 kilometres] of bas reliefs with twenty-seven portals formed by colossal winged bulls and lion-sphinxes”, although many were heavily calcined and remain in his excavation tunnels [Layard Papers, MS.39076, quoted by Barnett and Falkner 1962, xiii; cf. Russell 1991; Barnett, Bleibtreu and Turner 1998; Collins 2008, 74–95] (Fig. 17). The scale of production must have entailed industrial quarrying and there was a fall in quality judging by the variable skill of carving and shallower relief. However, the narrative scenes are complex and carefully composed so that a whole room may be devoted to a single event and the most important element of the scene, such as an attack on an enemy fortress, confronts the viewer as he enters the room and the king is shown viewing the aftermath: the siege of Lachish is one of the best examples of this and its perspective may have been deliberately depicted as seen from the site where Sennacherib sat and directed the battle [Ussishkin 2017]) (Fig. 18). The last-known large series of sculptures date to the reign of



Fig. 16. Genie with pollinator and bucket

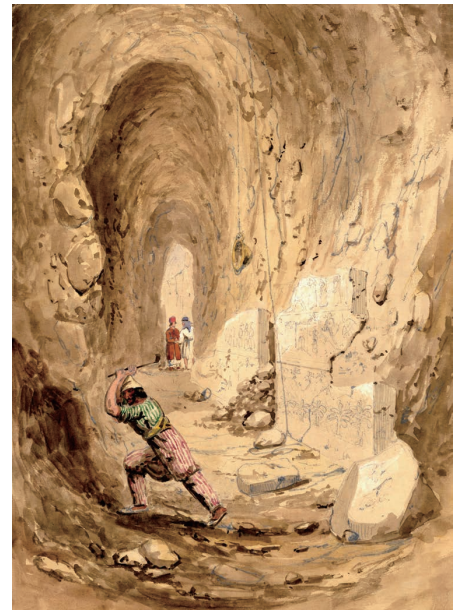


Fig. 17. Watercolour drawing by Frederick Charles Cooper showing the interior of one of Layard’s tunnels at Kuyunjik, with light and air penetrating through periodic vertical shafts

7) Judging by images published in the media, one of these had been re-used, was set upside-down, most likely with the face set against a mudbrick wall and only exposed when the later tunnelling followed the wall rather than the interior.



Ashurbanipal [Barnett 1976; Collins 2008, 96–141; Albenda 2017]. Some are divided into two or three registers but the most spectacular are either filled with detail or kept to the minimum necessary to express the key elements of the action. The first is exemplified by the battle of Til-Tuba scene which is one element in a series illustrating a successful campaign against the Elamites, and which ends with the powerful scene of Ashurbanipal feasting with his wife in an outdoor setting to the accompaniment of music while the head of his adversary hangs from a tree. The chaos of war is detailed in multiple individual scenes of death and dying, including the capture and beheading of Teumman, while parallel or sloping ground-lines create a sense of movement (Fig. 19). This contrasts with the parallel registers of Assyrian soldiers and prostrated Elamites on the opposite wall-slabs which underline the success of the Assyrian endgame and the restoration of order. The alternative narrative approach is that of his lion hunts, where the king is central to the action, larger than life and fearless as he slays lion after lion in an outdoor arena framed by an Assyrian shield-wall and baying mastiffs (Figs 20–21).

There has been much speculation as to the extent to which these wall-reliefs might have been painted. The ceremonial parts of the Assyrian palaces were burnt during their sack in 612 BC and their surfaces transformed by heat and hot ash. The lowest portions of some burnt reliefs from Khorsabad were unaffected, either because they had been protected by discarded roofing matter or by a build-up of floor levels since their construction, and infra-red imaging showed that parts of these had been highlighted with Egyptian Blue [Guralnick 2010]. The same pigment was widely applied at this site [Verri *et al.* 2009] (Fig. 22). The same colour scheme is shown on eighth century wall paintings from Tell Barsib and is the clearest illustration of the identity of approach to colour schemes regardless of media [Parrot 1961, 100–109; Albenda 2005, 33–74; Thomas ed. 2016, 286–87, cats 344–47].<sup>8)</sup> Egyptian Blue was developed in Egypt and widely employed there yet it has not been identified on Late Assyrian wall-reliefs of any period except those belonging to Sargon II. His death was considered deeply unlucky in Assyria and the capital shifted as a direct result to Nineveh. Was it because of this that this colour scheme associated with his rule was abandoned on



Fig. 18. The defacement and amputation of the enthroned Sennacherib



Fig. 19. Teumann is beheaded on the battlefield: the Assyrian soldiers are themselves singled out for revenge mutilation after the fall of Nineveh

8) Parrot (1961, 266) thought the blue to be coloured with lapis and the red to be mercury sulphide “with the clay of the wall apparently acting as a binding mechanism” but these statements are untrue.





Fig. 20. King Ashurbanipal hunting lions: note that he and his cab-driver have been clinically blinded after the fall of Nineveh so that the blind is leading the blind



Fig. 21. Assyrian shield wall defining the perimeter of Ashurbanipal's lion hunt



Fig. 22. Painted Sargonid sculpture from Khorsabad

the wall slabs? Nineteenth century excavators' descriptions, surviving traces and scientific analyses, including imaging and analyses of pigments, show that carbon-black, red ochre and possibly yellow were used to highlight the hair, beards, eyes, personal ornaments, bows and other weapons, horse trappings, feet, sandals and genie tongues on (unburnt) ninth century BC reliefs of Ashurnasirpal II [e.g. Layard 1849: vol. I, 64, 125–27, 136] but there are no visible traces of any other colours (Fig. 23); a single occurrence of green is reported on a sculpture from Khorsabad [Guralnick 2010, 783].<sup>9)</sup> It is possible that other pigments used a prime coat and/or organic binders which either did not survive the processes of destruction and cleaning or, perhaps more importantly, the exposure to light immediately after excavation as Layard remarked on how quickly the painted wall-plaster faded after excavation [Layard 1849, vol. I, 130]. However, in the absence of certain evidence it seems more likely that in these, as in earlier, periods a very limited colour palette was

9) The same pigments and colour palette were used on Middle Assyrian wall-paintings [Wartke 1995].

used to highlight certain details and (with the exception of the use of blue) with naturalistic colours rather than create fully polychromatic artworks.<sup>10)</sup> This highlighting was particularly effective in combination with key attributes of the low-relief representations and when these were viewed with hand-held sources of light moving past the reliefs in question [Paley 1976, 14; Sou 2015]. Moreover, the cut-in lines around the figures helped create shadows not dissimilar to the thick black outlines of the figures on wall-paintings: it is possible this was even accentuated on some of the sculptures with black pigment although no evidence for this has been found. Scientific analyses show that other colours such as pink only entered the Mesopotamian repertoire during the Seleucid period, as indeed was the extensive use of yellow and green [Kakoulli 2009; Simpson *et al.* 2012]. Finally, it should be added that where the original surfaces of the reliefs are preserved, it is clear that they were carefully polished and this negates the possibility that they had been wholly painted: attempts to reconstruct Assyrian reliefs in full polychromy are a misguided concept coloured by modern conceptions [Finkel and Seymour eds 2008, 111, fig. 89; Braekmans 2017, fig. 31.2)].

These figures combined the attributes of wisdom, strength and speed and were placed as protective figures. Most were carved from huge single solid blocks and are shown being transported in a finished state on one sequence of wall reliefs from Sennacherib's palace on Kuyunjik at Nineveh: those flanking one of the excavated entrances to Esarhaddon's palace on Tell Nebi Yunus were built of limestone blocks, but a second set discovered during illegal tunnelling under the same mound was constructed in the usual manner as single orthostats [Reade 2017, 442–55]. The gates themselves were closed with tall wooden double doors attached to massive uprights turning on pivots set into the ground rather than being hung from hinges. They are shown on Assyrian reliefs, described on two building inscriptions of Tiglath-pileser I from Nineveh: "I made high doors of fir, made (them) fast with bronze bands, (and) hung (them) in its gateways" [Grayson 1991, 55, 56] and on another of Ashurnasirpal II from Nimrud: "I hung doors of cedar, cypress, *daprānu*-juniper, (and) *meskannu*-wood in its doorways" [Grayson 1991, 228]. However, the best evidence for their appearance comes from the 64 hectare walled site of Imgur-Enlil (present-day Balawat), 15 kilometres north of Nimrud, where excavations in the temple of Mamu, a dream-god, revealed multiple bronze bands which originally decorated the exteriors of two such gates [Birch 1881/1903; Barnett *et al.* 2008] (Fig. 24). Each band was embossed and lightly engraved with double friezes representing real events with explanatory captions. They include scenes of the army besieging an enemy city or charging into battle and rows of prisoners laden with booty being brought to the Assyrian king, in this case Ashurnasirpal II and Shalmaneser III (858–824 BC). Another vignette records the moment when in 852 BC an Assyrian expedition entered the point where the river Tigris debauches from a natural tunnel in the mountains in eastern Turkey, illustrating masons cutting a stele onto the rock and soldiers with torches entering the water (Fig. 25):

"I marched to the source of the Tigris, the place where the water comes out, [and] made sacrifices ... I marched to the land Nairi. I created at the source of the Tigris, on a mountain cliff

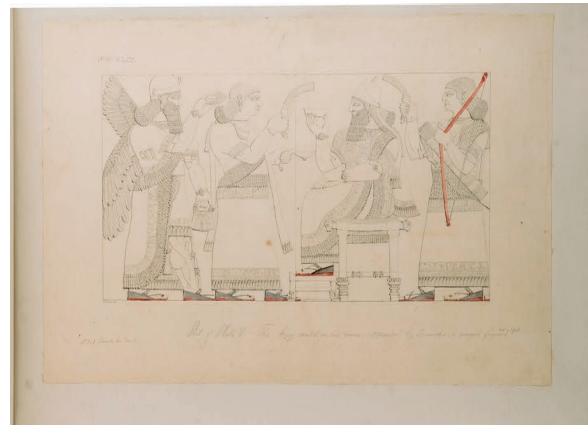


Fig. 23. Traces of paint are usually best preserved on the lowest portions of the reliefs (British Museum, Original Drawings)

10) A contrary view is taken by Gebhard *et al.* 2009.





Fig. 24. The original bronze bands from one of the gates at Balawat



Fig. 25. Assyrian expedition exploring the source of the river Tigris

where its water comes out, my royal statue. I wrote thereon praises of my power [and] my heroic deeds.” [Grayson 1996, 46–47]

The palace, temple and city gates were covered with arched brick vaults and the outer arches of these were highlighted with glazed bricks set in alternating colours, explaining how they were said to be “like the rainbow” [Turner 1970, 82]. Blue rosettes were popular at Khorsabad and were set in the gateway arches and high up on the city walls, probably below the crenellations judging by contemporary depictions of battlemented walls [Reade 1995, 228; cf. Mallowan 1966, vol. II, 462, fig. 378] (Fig. 26). Much larger glazed brick panels were installed in the throne-room suites of “Fort Shalmaneser” at Nimrud and Sargon’s palace at Khorsabad and represented the king beneath the winged disc symbol of the god Ashur and the sacred tree above, framed by a border of rows of genies, wild goats kneeling before palmettes, arcaded buds and pomegranates, and rows of scales representing mountains below [Reade 1963; 1995, 229–30; Guralnick 2010; Thomas ed. 2016, 205–207, cat. 211]. Marks on the tops of the bricks facilitated the assembly and these took the form of scratches, West Semitic (Aramaic or Phoenician) letters and pictograms [Layard 1849, vol. II, 13; Place 1867/70, vol. II, 253; Loud, Frankfort and Jacobsen 1936, 92–93; Loud and Altman 1938, 14; Reade 1963, 39; Curtis *et al.* 1993, 21–30, 35–36, figs 21–26; Curtis 2008, 62–64]. Set high into the walls were large square bronze or glazed plaques with prominent projecting central bosses (*sikkati*) and which may have served to hold coloured wall-hangings [Albenda 1981; Freestone 1991]. Above them, and immediately below the roof beams, were inserted fired clay or bronze-sheeted wooden corbels in the form of “hands of Ishtar”, and these had an apotropaic function [Curtis and Reade eds 1995, 104, cats 53–55; Soldi 2017].

This is not surprising as there are complex “Tree of Life” and geometric compositions in thirteenth century BC Middle Assyrian murals from Kar Tukulti-Ninurta, and even earlier wall-paintings from Kassite Dur Kurigalzu (modern Aqar Quf) in southern Iraq and Old Babylonian Mari, and this is probably the route of influence [Tomabechi 1983; Albenda 2005; Thomas ed. 2016, 125, cat. 116]. The best documented of the Late Assyrian wall paintings come from an eighth century BC provincial palace at Tell Barsib and show narrative scenes of court life, military victories and



apotropaic beasts, and use an identical colour palette as the Sargonid reliefs and a huge collapsed section of wall-painting found in Room 12 of Residence K at Khorsabad [Parrot 1961, 100–11; Thomas ed. 2016, 208–209, 286–87, cats 212–13, 344–47; Loud and Altman 1938, vol. II, 83–86, pls 43, 88–91; Green, Teeter and Larson eds 2012, 132–45, cat. 20; Thomas 2019]. Well-preserved paintings showing a line of life-size Assyrian royal guards walking beneath a frieze of *sikkati* framed by rosettes and lotus garlands was found in the throne-room (Room S5) and genies in fish cloaks set against Egyptian Blue backgrounds were found in another suite (Room T27) in “Fort Shalmaneser” (Mallowan 1966, vol. II, figs 307–308; Reade 1982, 108, col. pl. 7b–c).<sup>11)</sup> Layard records how in the North-West Palace there were other scenes painted above the wall slabs:

“the king, attended by his eunuchs and warriors, receiving his prisoners, entering into alliances with other monarchs, or performing some sacred duty. These representations were enclosed in coloured borders, of elaborate and elegant design. The emblematic tree, winged bulls, and monstrous animals were conspicuous amongst the ornaments.” [Layard 1849, vol. II, 262–63]<sup>12)</sup>

Smaller fragments of painted plaster found in the excavations of palaces at Khorsabad and Nineveh show guilloche designs, palmettes and circles in horizontal friezes framing scenes with trees and goats. The wall paintings therefore have the same compositions and colour schemes as the glazed brick and stone wall panels (Fig. 27). Layard thought that the ceilings of the palaces were coffered and “divided into square compartments, painted with flowers, or with the figures of animals. Some were inlaid with ivory, each compartment being surrounded by elegant borders and mouldings. The beams, as well as the sides of the chamber, may have been gilded, or even plated, with gold and silver” [Layard 1849, vol. II, 263–64], and fallen painted plaster fragments with rosette designs and roof beam impressions on the reverse were found in the centre of the throne-room in the North-West Palace and the throne-room of Sargon’s palace at Khorsabad [es-Soof 1963, 67; Mallowan 1966, vol. I, 105; Reade 1979, 19; Loud, Frankfort and Jacobsen 1936, 9, 23, 68–71, pls II–III]. A description of the building of Esarhaddon’s palace on Tell Nebi Yunus gives a vivid illustration of the opulent appearance of the palatial interiors as it describes the doors being made of sweet-smelling cypress and decorated with silver and copper bands, and how different suites were decorated in different styles: “a wing of white limestone and suites of ivory, ebony, box/walnut(?), sissoo, cedar (and) cypress” [Turner 1970, 78, 80–81].

All of the Assyrian cities were heavily defended with solid mudbrick walls with stone outer facings to deter siege engines: the walls of Nimrud required some 70 million bricks, the citadel wall alone was up to 37 metres thick, and the stone blocks used for the citadel at Khorsabad measured up to 2.7 metres long and weighed up to 23 tons each [Reade 1982, 105; Loud and Altman 1938, vol. II, 18]. Despite these efforts, the Assyrian cities were overwhelmed by a Median/Babylonian military coalition and their sacking in 612 BC was a violent and carefully planned annihilation [Miglus 2000;

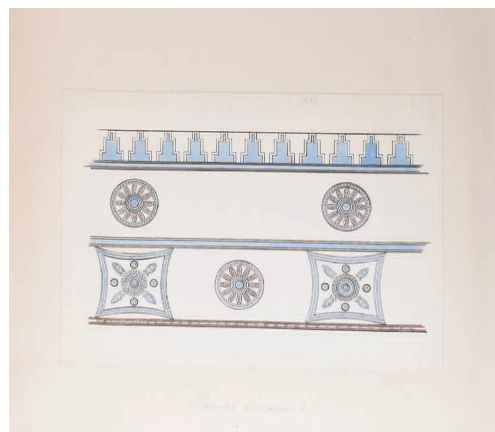


Fig. 26. Representations of Assyrian wall-paintings (British Museum, Original Drawings)

11) The wall-paintings were reburied and the pigments have not been analysed; see also Mallowan 1966, vol. II, 443.

12) Cf. also es-Soof 1963, 67: “the upper part of a beardless figure carrying a sword and wearing a headband, with his right arm lifted in front and his left lowered below him ... he and the rosettes were all painted in white and red with black outlines on a sky-blue ground”.

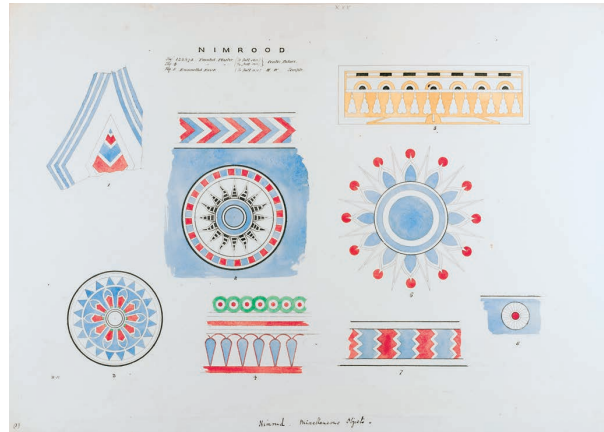


Fig. 27. Representations of fragmentary Assyrian wall-paintings (British Museum, Original Drawings)

Simpson 2015; 2020]. All of the excavated gateways at Nimrud, Khorsabad and Nineveh were found to have been bricked up from within to strengthen them, and Stronach reports that “we’ve come across ditches partially constructed, and weak positions in the walls that have been patchily repaired” [Barkho 1989], yet each of the excavated gates was found to be burnt and heaped skeletons of soldiers found within several [Barkho 1989; Stronach 1997, 318–19; Pickworth 2005; Simpson 2020]. Ashurnasipal’s wish that his palace not be turned into a warehouse and prison and then destroyed, quoted above, may have been read and violated as a direct consequence, and the large number of shackled human remains found thrown into an excavated well suggest mass execution was carried out on the citadels [Mahmoud Hussein 2008, 91; al-Fakhri 2008; Reade 2008; Simpson 2015, 5]. Little is known about what happened to the rest of the population but large numbers were probably massacred in revenge and the remainder deported to Babylonia. It is telling that the passage referring to the resettlement of deportees on the Adad-Nirari III stele found at Tell al-Rimah, mentioned above, was the portion which was systematically defaced, thus ritually undoing the closing line of the inscription: “Whoever shall blot out a single name from among these names, may the great gods fiercely destroy him” [Page 1968, 143]. The paucity of evidence for either post-Assyrian or Achaemenid occupation from the region imply that northern Iraq was largely deserted in the centuries which followed. The palaces and imperial store-rooms were thoroughly ransacked and the heavily fragmented state and lack of overlays on the furniture at “Fort Shalmaneser” shows how this was broken and stripped of metal and other precious overlays, leaving tiny fragments of the ivory behind. The roof beams were removed, leaving the palaces as open shells. The throne-rooms and temple sanctuaries were reserved for special treatment. Many of the carved faces of the Assyrian rulers were chiselled or pounded away, particularly where they were highlighted by their cuneiform captions or symbolically highlighted by their position behind the throne [Reade 2000b, 613, fig. 6; Porter 2009] (Fig. 28). Other sculptures and stelae were clinically defaced, torched and then



Fig. 28. Elamite revenge: the face of king Ashurbanipal has been deliberately defaced, his right arm amputated and his drinking bowl smashed

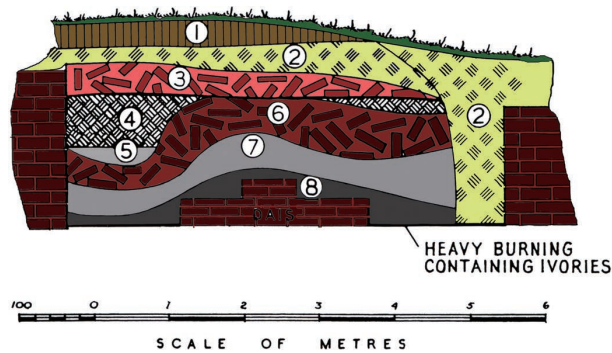


Fig. 29. Archaeological section through the throne-room in the Burnt Palace showing the thick concentration of ash over the throne-base [after Mallowan 1966]



Fig. 30. Watercolour drawing by Frederick Charles Cooper showing excavations at Nimrud

violently smashed, either across the centre or into many fragments as Loftus noted in the case of the North Palace of Ashurbanipal on Kuyunjik [cf. Barnett 1976, 18]. Judging by the relative depth of ash the throne-bases were piled high with combustible material and lit as bonfires, and tablets recording treaties between Esarhaddon and Median leaders were smashed on the base of the throne-room in the Burnt Palace as a violent act of ritual undoing and revenge [Simpson 2015; 2020] (Fig. 29). This entire process of ultra-violence with killing, desecration, demolition and asset-stripping probably took months, if not years, and must have been carefully planned and resourced.

Once abandoned, the sun-dried brick walls then will have split along the coursing and collapsed as soon as the first winter rains saturated the mud mortar along the tops of the roofless architecture. Pooling around the bottoms of the walls would have allowed salts to migrate into the brickwork and undermine the lower portions and led to further collapse. The upper parts of the wall-reliefs then gradually dissolved in the rain while the lower parts became buried in mudbrick collapse. For a few years survivors probably hid in the ruins and dug holes looking for treasure but even this stopped, Assyria became a cursed territory for centuries, and its great palaces forgotten until their rediscovery in the 1840s revealed its glories again (Fig. 30).

## Bibliography

- Albenda, P.  
 1978 Assyrian carpets in stone, *Journal of the Ancient Near East Society of Columbia University* 10: 1–19.  
 1981 Decorated Assyrian Knob-Plates in the British Museum, *Iraq* 53: 43–53.  
 1986 *The Palace of Sargon King of Assyria*. Paris: Éditions Recherche sur les Civilisations, “synthèse” 22.  
 2005 *Ornamental Wall Painting in the Art of the Assyrian Empire*. Leiden: Brill / London: Styx; Cuneiform Monographs 28.  
 2017 Ashurbanipal and the Lion Hunt Reliefs, *Nineveh, the Great City. Symbol of Beauty and Power* (Petit, L. P. and Morandi Bonacossi, D., eds), 198–200. Leiden: Sidestone Press; Papers on Archaeology of the Leiden Museum of Antiquities (PALMA), 13.



- Anderson, J.  
2020. Of Kushite kings and sacred landscapes in the Middle Nile valley, *In Context: The Reade Festschrift* (Finkel, I. L. and Simpson, St J., eds), 215–31. Oxford: Archaeopress Archaeology.
- Barkho, L.  
1989. Fallen warriors may hold clue to the last days of ancient Assyrian capital, *Oman Daily Observer* 24th August [reprinted in *BANEA [British Association for Near Eastern Archaeology] Newsletter* 3, 1990: 47].
- Barnett, R.D.  
1976. *Sculptures from the North Palace of Ashurbanipal at Nineveh (668–627 B.C.)*. London: British Museum Publications.
- Barnett, R.D. and Falkner M.  
1962. *The Sculptures of Aššur-Nasir-Apli II (883–859 B.C.), Tigleth-pileser III (745–727 B.C.), Esarhaddon from the Central and South-West Palaces at Nimrud*. London: British Museum Publications.
- Barnett, R.D., Bleibtreu, E. and Turner, G.  
1998. *Sculptures from the Southwest Palace of Sennacherib at Nineveh*. London: British Museum Publications (two volumes).
- Barnett, R.D. *et al.*  
2008. *The Balawat Gates of Ashurnasirpal II*. London: British Museum Press.
- Bianchetti, P.L.  
2011. The Stone of the Reliefs, *The Sennacherib Wall Reliefs at Nineveh* (Lippolis, C., ed.), 129–35. Firenze: Le Lettere.
- Bianchetti, P.L. and Vigliano, G.  
2011. Sampling and Analysis, *The Sennacherib Wall Reliefs at Nineveh* (Lippolis, C., ed.), 137–38. Firenze: Le Lettere.
- Birch, W. de G.  
1881/1903. *The bronze ornaments of the palace gates of Balawat (Shalmaneser II. B.C. 859–825)*. London: Society of Biblical Archaeology.
- Botta, P.E.  
1849/50. *Monument de Ninive*. Paris (five volumes).
- Braekmans, D.  
2017. (De)colouring Ancient Nineveh using Portable XRF Equipment, *Nineveh, the Great City. Symbol of Beauty and Power* (Petit, L. P. and Morandi Bonacossi, D., eds), 160–66. Leiden: Sidestone Press; Papers on Archaeology of the Leiden Museum of Antiquities (PALMA), 13.
- Collins, P.  
2008. *Assyrian Palace Sculptures*. London: British Museum Press.
- Curtis, J.  
2008. The British Museum excavations at Nimrud in 1989, *New Light on Nimrud. Proceedings of the Nimrud Conference 11th–13th March 2002* (Curtis, J. E., McCall, H., Collon, D. and al-Gailani Werr, L., eds), 57–64. London: British Institute for the Study of Iraq in association with the British Museum.
- Curtis, J.E., Collon, D., Green, A.R. and Searight, A.  
1993. British Museum excavations at Nimrud and Balawat in 1989, *Iraq* 55: 1–37.
- Curtis, J.E. and Reade, J.E., eds  
1995. *Art and Empire. Treasures from Assyria in the British Museum*. London: British Museum Press.
- Ensor, J.  
2017. Previously untouched 600BC palace discovered under shrine demolished by Isil in Mosul, *The Telegraph* 28th February [<https://www.telegraph.co.uk/news/2017/02/27/previously-untouched-600bc-palace-discovered-shrine-demolished/>].
- es-Soof, B.  
1963. Further Investigations In Assur-nasir-pal's Palace, *Sumer* 19: 66–68, pls I–III.

- Al-Fakhri, J.  
 2008 Excavation of the Well in Court 80, *New Light on Nimrud. Proceedings of the Nimrud Conference 11th–13th March 2002* (Curtis, J. E. – McCall, H. – Collon, D. – al-Gailani Werr, L., eds), 99–100. London: British Institute for the Study of Iraq in association with the British Museum.
- Fazio, G.  
 2011 The Sculptural Decoration of Room V in Sennacherib's Palace at Nineveh, *The Sennacherib Wall Reliefs at Nineveh* (Lippolis, C., ed.), 117–27. Firenze: Le Lettere.
- Finkel, I.L. and Seymour, M., eds  
 2008 *Babylon. Myth and Reality*. London: British Museum Press.
- Fiorina, P.  
 2008 Italian Excavations at Nimrud-Kalhu: Chronological and Stratigraphical Problems, *New Light on Nimrud. Proceedings of the Nimrud Conference 11th–13th March 2002* (Curtis, J. E., McCall, H., Collon, D. and al-Gailani Werr, L., eds), 53–56. London: British Institute for the Study of Iraq in association with the British Museum.
- Freestone, I.C.  
 1991 Technical Examination of Neo-Assyrian Glazed Wall Plaques, *Iraq* 53: 55–58.
- Gebhard, R., Blumenau, E., Brünner, J., Emmerling, E., Dietemann, P., Grimm, A., Grundmann, G., Gussmann, S., Höfle, E., Holl, K., Jändl, B., Pfanner, M., Rommel, A., Schaich, M., Snethlage, R., Sonnenwald, M., Stolz, J., Stege, H., Thiemann, L. and Wagner, N.  
 2009 The Polychromy of Neoassyrian Bas-Reliefs from the Northwest Palace of Ashurnasirpal II at Nimrud. First Results from the Munich Study, *The Second International Symposium of the Terra-cotta Army and Polychrome Cultural Relics Conservation and Reserch* [sic], 431–45. Xi'an.
- Grayson, A.K.  
 1991 *Assyrian Rulers of the Early First Millennium BC, I (1114–859 BC)*. Toronto: University of Toronto Press; Royal Inscriptions of Mesopotamia, Assyrian Periods, 2.  
 1996 *Assyrian Rulers of the Early First Millennium BC, II (858–745 BC)*. Toronto: University of Toronto Press; The Royal Inscriptions of Mesopotamia, Assyrian Periods, 3.
- Grayson, A.K. and Novotny, J.  
 2012 *The Royal Inscriptions of Sennacherib, King of Assyria (704–681 BC), Part 1*. Winona Lake: Eisenbrauns; The Royal Inscriptions of the Neo-Assyrian Perio, 3/1.
- Green, J., Teeter, E. and Larson, J.A., eds  
 2012 *Picturing the Past. Imaging and Imagining the Ancient Middle East*. Chicago: The Oriental Institute of the University of Chicago; Oriental Institute Museum Publication 34.
- Guralnick, E.  
 2010 Color at Khorsabad: Palace of Sargon II, *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East 5 May – 10 May 2009, "Sapienza", Università di Roma. Volume 1: Near Eastern Archaeology in the Past, Present and Future. Heritage and Identity. Ethnoarchaeological and Interdisciplinary Approach, Results and Perspectives. Visual Expression and Craft Production in the Definition of Social Relations and Status* (Matthiae, P., Pinnock, F., Nigro, L. and Marchetti, N., eds), 781–91. Wiesbaden: Harrassowitz.
- Harrison, T.  
 2017 The Neo-Assyrian provincial administration at Tayinat (ancient Kunalia), *The provincial archaeology of the Assyrian empire* (MacGinnis, J., Wicke, D. and Greenfield, T., eds), 253–64. Cambridge: McDonald Institute for Archaeological Research.
- Kakoulli, I.  
 2009 *Greek Painting Techniques and Materials from the Fourth to the First Century BC*. London: Archetype.
- King, L.W.  
 1915 *Bronze Reliefs from the Gates of Shalmaneser King of Assyria B.C. 860–825*. London: Trustees of the British Museum.

Layard, A.H.

1849 *Nineveh and its Remains*. London: John Murray (two volumes).

1853a *Discoveries in the Ruins of Nineveh and Babylon*. London: John Murray.

1853b *A Second Series of the Monuments of Nineveh*. London: John Murray.

Lippolis, C.

2011 The Main Phases in the Production of the Assyrian Reliefs, *The Sennacherib Wall Reliefs at Nineveh* (Lippolis, C., ed.), 23–64. Firenze: Le Lettere.

Loud, G. and Altman, C.B.

1938 *Khorsabad, Part II: the Citadel and the Town* (Oriental Institute Publications, 40). Chicago: University of Chicago Press.

Loud, G., Frankfort, H. and Jacobsen, T.

1936 *Khorsabad, Part I: Excavations in the Palace and at a City Gate* (Oriental Institute Publications, 38). Chicago: University of Chicago Press.

Luckenbill, A.D.

1926/27 *Ancient Records of Assyria and Babylonia*. New York: Greenwood Press (two volumes).

MacGinnis, J.

2017 Iraqi Excavations at Nineveh, *Nineveh, the Great City. Symbol of Beauty and Power* (Petit, L. P. and Morandi Bonacossi, D., eds), 91–93. Leiden: Sidestone Press; Papers on Archaeology of the Leiden Museum of Antiquities (PALMA), 13.

Mahmoud Hussein, M.

2008 Recent excavations in Nimrud, *New Light on Nimrud. Proceedings of the Nimrud Conference 11th–13th March 2002* (Curtis, J. E. – McCall, H. – Collon, D. – al-Gailani Werr, L., eds), 83–98. London: British Institute for the Study of Iraq in association with the British Museum.

2016 *Nimrud. The Queens' Tombs*. Baghdad: Iraqi State Board of Antiquities and Heritage / Chicago: The Oriental Institute of the University of Chicago.

Mallowan, M.E.L.

1966 *Nimrud and its Remains*. London: Collins (two volumes).

Matthäus, H.

1985 *Metalgefäße und Gefäßuntersätze der Bronzezeit, der.*

Miglus, P.A.

2000 Die Letzten Tage von Assur und die zeit Danach, *Isimu III. Revista sobre Oriente Próximo y Egipto en la antigüedad*: 85–100.

Mitchell, T.C. and Middleton, A.P.

2002 The stones used in Assyrian Sculptures, *Journal of Cuneiform Studies* 54: 93–98.

Morandi Bonacossi, D.

2018 Water for Nineveh. The Nineveh Irrigation System in the Regional Context of the 'Assyrian Triangle': A First Geoarchaeological Assessment, *Water for Assyria* (Kühne, H., ed.), 77–115. Wiesbaden: Harrassowitz; Studia Chaburensia, 7.

Oates, J. and D.

2001 *Nimrud. An Assyrian Imperial City Revealed*. London: British School of Archaeology in Iraq.

Page, S.

1968 A stela of Adad-nirari III and Nergal-ereš from Tell al Rimah, *Iraq* 30: 139–53, pls XXXIX–XLII.

Paley, S.M.

1976 *King of the World. Ashur-nasir-pal II of Assyria 883–859 B.C.* New York: The Brooklyn Museum.

Parpola, S.

1980 The murder of Sennacherib, *Death in Mesopotamia: papers read at the 26e Rencontre Assyriologique internationale* (Alster, B., ed.), 171–82. Copenhagen: Akademisk Forlag.



- Parrot, A.  
1961 *The Arts of Assyria*. New York: Golden Press.
- Pickworth, D.  
2005 Excavations at Nineveh: The Halzi Gate, *Iraq* 67: 295–316.
- Place, V.  
1867/70 *Ninive et l'Assyrie*. Paris (three volumes).
- Porter, B.N.  
2009 Noseless in Nimrud: More Figurative Responses to Assyrian Domination, *Studia Orientalia* 106 [Of God(s), Trees, Kings and Scholars. Neo-Assyrian and related studies in honour of Simo Parpola, edited by Mikko Luukko, Saana Svärd & Raija Mattila]: 201–20.
- Reade, J.E.  
1963 A glazed brick panel from Nimrud, *Iraq* 25/1 (spring): 38–47.  
1978 Studies in Assyrian Geography, Part I: Sennacherib and the Waters of Nineveh, *Revue d'assyriologie et d'archéologie orientale* 72: 47–72, 157–80.  
1979 Assyrian Architectural Decoration: Techniques and Subject Matter, *Baghdader Mitteilungen* 11: 17–49, pls I–X.  
1982 Nimrud, *Fifty Years of Mesopotamian Discovery. The work of the British School of Archaeology in Iraq 1932–1982* (Curtis, J., ed.), 99–112, pls 7–8a. London: The British School of Archaeology in Iraq.  
1985 Texts and sculptures from the North-West Palace, Nimrud, *Iraq* 47: 203–14, pls XXXVII–XLIV.  
1994 Revisiting the North-West Palace, Nimrud, *Orientalia* 63/3: 273–78, pls IV–V.  
1995 The Khorsabad glazed bricks and their symbolism, *Khorsabad, le palais de Sargon II, roi d'Assyrie* (Caubet, A., ed.), 225–36. Paris: La Documentation Française.  
2000a Ninive (Nineveh), *Reallexikon der Assyriologie* 9 (5/6), 388–433.  
2000b Restructuring the Assyrian sculptures, *Variatio delectate. Iran und der Western. Gedenkschrift für Peter Calmeyer* (Dittmann, R., Hrouda, B., Löw, U., Matthiae, P., Mayer-Opificius, R. and Thürwächter, S., eds), 607–25. Münster: Ugarit-Verlag; *Alter Orient und Altes Testament* 272.  
2002 The Ziggurat and Temples of Nimrud, *Iraq* 64: 135–216.  
2008 An Interpretation of the Vaulted Complex and Well 4 in the North-West Palace, Nimrud, *New Light on Nimrud. Proceedings of the Nimrud Conference 11th–13th March 2002* (Curtis, J. E. – McCall, H. – Collon, D. – al-Gailani Werr, L., eds), 101–102. London: British Institute for the Study of Iraq in association with the British Museum.  
2017 The Assyrian Palace at Nabi Yunus, Nineveh, *At the Dawn of History. Ancient Near Eastern Studies in Honour of J. N. Postgate* (Heffron, Y., Stone, A. and Worthington, M., eds), vol. 2, 431–58. Winona Lake: Eisenbrauns.
- Roaf, M.  
1983 Sculptures and sculptors at Persepolis, *Iran* 21: 1–164.
- Rollefson, G.O.  
1986 Neolithic 'Ain Ghazal (Jordan): ritual and ceremony, II, *Paléorient* 12/1: 45–52.
- Russell, J.  
1991 *Sennacherib's Palace without Rival at Nineveh*. Chicago: University of Chicago Press.
- Scott, M.L. and MacGinnis, J.  
1990 Notes on Nineveh, *Iraq* 52: 63–73.
- Simpson, St J.  
2015 Destructions now and then: causes and effects, *Mesopotamia* 50: 1–21.  
2020 Annihilating Assyria, *In Context: The Reade Festschrift* (Finkel, I. L. and Simpson, St J., eds), 141–65. Oxford: Archaeopress Archaeology.
- Simpson, St J., Ambers, J., Verri, G., Deviese, T. and Kirby, J.  
2012 Painted Parthian Stuccoes from Southern Iraq, *Proceedings of the 7th International Congress on the Archaeology of the Ancient Near East, 12 April – 16 April 2010, the British Museum and UCL, London. Volume 2: Ancient & Modern Issues in Cultural Heritage, Colour & Light in Architecture, Art & Material Culture, Islamic Archaeology* (Matthews, R., Curtis, J., Seymour, M., Fletcher, A., Gascoigne, A., Glatz, C.,

- Simpson, St J., Taylor, H., Tubb, J. N. and Chapman, R., eds), 209–20. Wiesbaden: Harrassowitz.
- Smith, G.
  - 1875 *Assyrian Discoveries; an account of explorations and discoveries on the site of Nineveh, during 1873 and 1874*. London: Sampson Low, Marston, Low and Searle.
- Soldi, S.
  - 2017 “Assyrian Clay Hands” in the Architecture of the Ancient Near East, *Metropolitan Museum Journal* 52: 8–23.
- Sou, I.
  - 2015 Digital recolourisation and the effects of light on Neo-Assyrian reliefs, *Antiquity* 348/89 (December); <https://www.antiquity.ac.uk/projgall/sou348> (accessed August 2018).
- Stronach, D.
  - 1997 Notes on the Fall of Assyria, *Assyria 1995. Proceedings of the 10th Anniversary Symposium of the Neo-Assyrian Text Corpus Project, Helsinki, September 7–11, 1995* (Parpola, S. – Whiting, R. M., eds), 307–24. Helsinki: Neo-Assyrian Text Corpus Project.
- Sweek, T. and Simpson, St J.
  - 2009 An unfinished Achaemenid sculpture from Persepolis, *The British Museum Technical Research Bulletin* 3: 83–88.
- Thomas, A.
  - 2019 *Les peintures murales du palais de Tell Ahmar: les couleurs de l'Empire assyrien*. Dijon: Faton.
- Thomas, A., ed.
  - 2016 *L'histoire commence en Mésopotamie*. Lens: Musée du Louvre-Lens / Ghent: Snoeck.
- Tomabechi, Y.
  - 1983 Wall paintings from Dur Kurigalzu, *Journal of Near Eastern Studies* 42/2: 123–31.
- Turner, G.
  - 1970 Tell Nebi Yunus: the *ekal mašarti* of Nineveh, *Iraq* 32: 68–85.
- Ur, J.A.
  - 2005 Sennacherib's Northern Assyrian Canals: New Insights from Satellite Imagery and Aerial Photography, *Iraq* 67: 317–45.
- Ur, J. and Osborne, J.
  - 2017 The rural landscape of the Assyrian heartland: recent results from Arbail and Kilizu provinces, *The provincial archaeology of the Assyrian empire* (MacGinnis, J., Wicke, D. and Greenfield, T., eds), 163–74. Cambridge: McDonald Institute for Archaeological Research.
- Ur, J. and Reade, J. E.
  - 2015 The Hydraulic Landscape of Nimrud, *Mesopotamia* 50: 25–51.
- Ussishkin, D.
  - 2017 The Lachish Reliefs, *Nineveh, the Great City. Symbol of Beauty and Power* (Petit, L. P. and Morandi Bonacossi, D., eds), 192–97. Leiden: Sidestone Press; Papers on Archaeology of the Leiden Museum of Antiquities (PALMA), 13.
- Verri, G., Collins, P., Ambers, J., Sweek, T. and Simpson, St J.
  - 2009 Assyrian Colours: pigments on a Neo-Assyrian relief of a parade horse, *The British Museum Technical Research Bulletin* 3: 57–62.
- Wartke, R.-B.
  - 1995 Wall painting from Kar Tukulti-Ninurta, *Assyrian Origins: Discoveries at Ashur on the Tigris. Antiquities in the Vorderasiatisches Museum, Berlin* (Harper, P. O., Klengel-Brandt, E., Aruz, J. and Benz, K., eds), 110–11, cat. 74. New York: The Metropolitan Museum of Art.
- Watkins, T.
  - 1990 The Origins of House and Home? *World Archaeology* 21/3 (February): 336–47.

Wilkinson, T.J., Barbanes Wilkinson, E., Ur, J. and Altaweel, M.

2005 Landscape and Settlement in the Neo-Assyrian Empire, *Bulletin of the American Schools of Oriental Research* 340 (November): 23–56.

Winter, I.J.

1983 The Program of the Throneroom of Assurnasirpal II, *Essays on Near Eastern Art and Archaeology in Honor of Charles Kyrle Wilkinson* (Harper, P. O. and Pittmann, H., eds), 15–32. New York: The Metropolitan Museum of Art.

Wiseman, D.J.

1952 A new stela of Aššur-nasir-pal II, *Iraq* 14: 24–44, pls II–XI.